ENV-001563

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

July 8, 2003

CERTIFIED MAIL
7002 0510 00034125 3867

Mr. Christopher Allard
Terminal Manager
Shell Oil Products US
2555 – 13th Avenue SW
Seattle, WA 98134

Dear Mr. Allard:

RE: NPDES Permit Issuance
Waste Discharge Permit No. WA-000179-1; Shell Oil Products-Seattle Terminal
Expiration Date: April 30, 2008

Under the provisions of Chapter 90.48 RCW Water Pollution Control Laws as amended and the Federal Water Pollution Control Act (The Clean Water Act) Title 33 United States Code, Section 1251 et seq., the enclosed NPDES Permit No. WA-000179-1 is hereby issued to Shell Oil Products – Seattle Terminal located at 2555 – 13th Avenue SW, Seattle, WA (King County).

The permit authorizes the Permittee to discharge treated wastewater into the Duwamish River West Waterway subject to the terms and conditions of the permit.

Pursuant to RCW 90.48.465, a permit fee will be assessed. The annual fee for both industrial and municipal/domestic discharges is computed according to the permit fee schedules contained in WAC 173-224-040. We notify permit holders of fee charges by mailed billing statements. Failure to pay the applicable permit fee may result in the suspension or revocation of the permit, and could result in the issuance of civil penalties or actions to enjoin the activity under the permit.

Any person feeling aggrieved by this NPDES permit may obtain review thereof by application, within 30 days of receipt of this permit, to the Washington Pollution Control Hearings Board, Post Office Box 40903, Olympia, WA 98504-0903. Concurrently, a copy of the application must be sent to the Department of Ecology, Post Office Box 47600, Olympia, WA 98504-7600. These procedures are consistent with the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Any appeal must contain the following in accordance with the rules of the hearings board:

a) The appellant's name and address;
b) The date and number of the permit appealed;
c) A description of the substance of the permit, that is the subject of the appeal;
d) A clear, separate, and concise statement of every error alleged to have been committed;
e) A clear and concise statement of facts which the requester relies to sustain his or her statements of error; and
f) A statement setting forth the relief sought.

An application for permit renewal must be made at least 180 days prior to the expiration date of this permit. If at any time during the term of this permit a question should arise regarding the permit or discharge, or if there is a significant change in the discharge or operation, please contact Jeanne Tran at (425) 649-7078.

Also enclosed is a pre-printed Discharge Monitoring Report (DMR) form. Please note that your permit limits, frequency, and sample type are printed in the shaded areas of your DMR. This is your master copy. Please make copies as needed for our submittals. If no discharge occurs during a monitoring period, you must still submit a DMR with a statement that no discharge occurred.

Sincerely,

Kevin C. Fitzpatrick
Water Quality Section Manager
Northwest Regional Office

KCF:tm
Enclosures

cc: Bev Poston, Permit Fee Unit
Jeanne Tran, Facility Manager
Chris Smith, WPLCS
Central Files: WQ 1.1, WA-000179-1; Shell Oil Products-Seattle Terminal

DISCHARGE MONITORING REPORT (DMR) INSTRUCTIONS

To avoid processing delays and the need to resubmit your DMR's, please comply with the following requirements:

- Enter the monitoring period at the top of the form. Monitoring periods consist of a calendar month or months (quarterly reporting). (For example, July 1-July 31, not June 27-July 27)

- The forms must be received at the Department of Ecology Northwest Regional Office by the date specified in your permit. Address the envelope to the attention of Chris Smith, WPLCS Coordinator, 3190 160th Avenue SE, Bellevue, WA 98008-5452.

- All entries on the forms must be in ink or typewritten. The forms must be signed in ink by the responsible official for the facility or by a person who has been designated authority to do so in writing by the responsible official. The Department must have a record of the designation letter on file to accept signatures by persons other than the responsible official.

- Circle permit violations and provide a written explanation of the cause of the violation and remedies used to correct the problem. The number of violations must be entered on the DMR form under the "No. Ex" column on the right side of the DMR form. See the instructions on the back of the DMR form for details on how to fill in that column.

- Failure to report the results of tests required by your permit is a permit violation. If your facility did not discharge during the monitoring period, indicate by checking the box in the upper right hand corner for no discharge. Items that are not required for the monitoring period (such as tests done once per quarter) should be labeled "NA" for not applicable.

If you encounter difficulty using the enclosed form, contact your facility manager. Enclosed are double sided forms. Keep at least one blank form to photocopy. You are responsible for keeping forms on hand for use at your facility.

Questions; contact Chris Smith, WPLCS Coordinator, (425) 649-7214.

Permittee Name/Address
Include Name/Location (if different)

NAME SHELL OIL PRODUCTS US 5040

ADDRESS 2555-13TH AVE SW
SEATTLE, WA 98134

FACILITY SHELL SEATTLE TERMINAL

LOCATION 2555-13TH AVE SW, SEATTLE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT (*DMR*)

WA-0001791	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

NOTE: Read instructions before completing this form.

Discharge Location
Lat 47° 34' 48" N
Long 122° 21' 52" W
NO DISCHARGE ☐

Parameter		QUANTITY OR LOADING Average	Maximum	Units	QUALITY OR CONCENTRATION Minimum	Average	Maximum	Units	No. of Exceedances	Frequency of Analysis	Sample Type
FLOW	Sample Measurement	*******		GPD	*******	*******	*******	***			
	Permit Requirement	*******	REPORT		*******	*******	*******			07/07	EST.
OIL & GREASE	Sample Measurement	*******	*******	***	*******			mg/L			
	Permit Requirement	*******	*******		*******	10	15			01/30	GRAB
OILY SHEEN	Sample Measurement	*******		YES/	*******	*******	*******	***			
	Permit Requirement	*******	REPORT	NO	*******	*******	*******			07/07	VISUAL
TPH-G	Sample Measurement	*******	*******	***	*******	*******		mg/L			
	Permit Requirement	*******	*******		*******	*******	REPORT			01/30	GRAB
BENZENE	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	71			01/30	GRAB
ETHYLBENZENE	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	100			01/30	GRAB
BTEX	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	REPORT			01/30	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPAREO UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIEO PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.		TELEPHONE	DATE
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	( ) AREA CODE NUMBER	/ / YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (**Reference all attachments here**)

General Instructions

1. If form has been partially completed by preprinting, disregard instructions directed at entry of that information already preprinted.
2. Enter *"Permittee Name/Mailing Address* (and facility name/location, if different)," *"Permit Number,"* and *"Discharge Number"* where indicated. (A separate form is required for each discharge.)
3. Enter dates beginning and ending *"Monitoring Period"* covered by form where indicated.
4. Enter each *"Parameter"* as specified in monitoring requirements of permit.
5. Enter *"Sample Measurement"* data for each parameter under *"Quantity"* and *"Quality"* in units specified in permit. *"Average"* is normally arithmetic average (geometric average for bacterial parameters) of all sample measurements for each parameter obtained during *"Monitoring Period"*; *"Maximum"* and *"Minimum"* are normally extreme high and low measurements obtained during *"Monitoring Period."* (Note to **municipals with secondary treatment requirement:** Enter 30-day average of sample measurements under *"Average,"* and enter maximum 7-day average of sample measurements obtained during monitoring period under *"Maximum."*)
6. Enter *"Permit Requirement"* for each parameter under *"Quantity"* and *"Quality"* as specified in permit.
7. Under *"No. of Exceedances"* enter number of sample measurements during monitoring period that exceed maximum (and/or minimum or 7-day average and monthly average as appropriate) permit requirement for each parameter. If none, enter *"0."*
8. Enter *"Frequency of Analysis"* both as *"Sample Measurement"* (actual frequency of sampling and analysis used during monitoring period) and as *"Permit Requirement"* specified in permit. (e.g., Enter *"Cont,"* for continuous monitoring, *"1/7"* for one day per week, *"1/30"* for one day per month, *"1/90"* for one day per quarter, etc.)
9. Enter *"Sample Type"* both as *"Sample Measurement"* (actual sample type used during monitoring period) and as *"Permit Requirement,"* (e.g., Enter *"Grab"* for individual sample, *"24HC"* for 24-hour composite, *"N/A"* for continuous monitoring, etc.)
10. Where violations of permit requirements are reported, attach a brief explanation to describe cause and corrective actions taken, and reference each violation by date.
11. If "no discharge" occurs during monitoring period, check the *"No Discharge"* box in the upper right-hand corner of page 1.
12. Enter *"Name/Title of Principal Executive Officer"* with *"Signature of Principal Executive Officer of Authorized Agent," "Telephone Number,"* and *"Date"* at bottom of form.
13. Mail signed Report to Office(s) by date(s) specified in permit. Retain copy for your records.
14. More detailed instructions for use of this *Discharge Monitoring Report (DMR)* form may be obtained from Office(s) specified in permit.

Legal Notice

This report is required by law (33 U.S.C. 1318; 40 C.F.R. 125.27). Failure to report or failure to report truthfully can result in civil penalties not to exceed $10,000 per day of violation; or in criminal penalties not to exceed $25,000 per day of violation, or by imprisonment for not more than one year, or by both.

Permittee Name/Address
Include Name/Location (if different)

NAME SHELL OIL PRODUCTS US 5040

ADDRESS 2555-13TH AVE SW
SEATTLE, WA 98134

FACILITY SHELL SEATTLE TERMINAL

LOCATION 2555-13TH AVE SW, SEATTLE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT(*DMR*)

WA-0001791	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

NOTE: Read instructions before completing this form.

Discharge Location
Lat 47° 34' 48" N
Long 122° 21' 52" W
NO DISCHARGE ☐

Parameter		QUANTITY OR LOADING Average	Maximum	Units	QUALITY OR CONCENTRATION Minimum	Average	Maximum	Units	No. of Exceed-ances	Frequency of Analysis	Sample Type
TSS	Sample Measurement	*******	*******	***	*******			mg/L			
	Permit Requirement	*******	*******		*******	21	33			01/30	COMP
pH	Sample Measurement	*******	*******	***		*******		STD.			●
	Permit Requirement	*******	*******		6.5	*******	8.5	UNITS		07/07	GRAB
PRIORITY	Sample Measurement	*******	*******	***	*******			µg/L			
POLLUTANTS SCAN*	Permit Requirement	*******	*******		*******	REPORT	SEPARATE			1/YR	GRAB
ZINC	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	1138**			01/30	GRAB
LEAD	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	REPORT			01/30	GRAB
COPPER	Sample Measurement	*******	*******	***	*******	*******		µg/L			
	Permit Requirement	*******	*******		*******	*******	REPORT			01/30	GRAB
	Sample Measurement										●
	Permit Requirement										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.		TELEPHONE	DATE
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	( ) AREA CODE NUMBER	/ / YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (**Reference all attachments here**)

* REPORT SEPERATELY.

** INTERIM LIMIT (JULY 2, 2003 TO JANUARY 31, 2005)

General Instructions

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2. Enter *"Permittee Name/Mailing Address* (and facility name/location, if different)," *"Permit Number,"* and *"Discharge Number"* where indicated. (A separate form is required for each discharge.)
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6. Enter *"Permit Requirement"* for each parameter under *"Quantity"* and *"Quality"* as specified in permit.
7. Under *"No. of Exceedances"* enter number of sample measurements during monitoring period that exceed maximum (and/or minimum or 7-day average and monthly average as appropriate) permit requirement for each parameter. If none, enter *"0."*
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9. Enter *"Sample Type"* both as *"Sample Measurement"* (actual sample type used during monitoring period) and as *"Permit Requirement,"* (e.g., Enter *"Grab"* for individual sample, *"24HC"* for 24-hour composite, *"N/A"* for continuous monitoring, etc.)
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Permittee Name/Address
Include Name/Location (if different)

NAME SHELL OIL PRODUCTS US 5040

ADDRESS 2555-13TH AVE SW
SEATTLE, WA 98134

FACILITY SHELL SEATTLE TERMINAL

LOCATION 2555-13TH AVE SW, SEATTLE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT(*DMR*)

WA-0001791	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

NOTE: Read instructions before completing this form.

Discharge Location
Lat 47° 34' 52" N
Long 122° 21' 13" W
NO DISCHARGE

Parameter		QUANTITY OR LOADING Average	Maximum	Units	QUALITY OR CONCENTRATION Minimum	Average	Maximum	Units	No. of Exceedances	Frequency of Analysis	Sample Type
FLOW	Sample Measurement	*******		GPD	*******	*******	*******	***			
	Permit Requirement	*******	REPORT		*******	*******	*******			01/30	EST.
OIL & GREASE	Sample Measurement	*******	*******	***	*******			mg/L			
	Permit Requirement	*******	*******		*******	10	15			01/30	GRAB
OILY SHEEN	Sample Measurement	*******		YES/	*******	*******	*******	***			
	Permit Requirement	*******	REPORT	NO	*******	*******	*******			07/07	VISUAL
pH	Sample Measurement	*******	*******	***	*******	*******		STD.			
	Permit Requirement	*******	*******		*******	*******	REPORT	UNITS		01/30	GRAB
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										

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6. Enter *"Permit Requirement"* for each parameter under *"Quantity"* and *"Quality"* as specified in permit.
7. Under *"No. of Exceedances"* enter number of sample measurements during monitoring period that exceed maximum (and/or minimum or 7-day average and monthly average as appropriate) permit requirement for each parameter. If none, enter *"0."*
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9. Enter *"Sample Type"* both as *"Sample Measurement"* (actual sample type used during monitoring period) and as *"Permit Requirement,"* (e.g., Enter *"Grab"* for individual sample, *"24HC"* for 24-hour composite, *"N/A"* for continuous monitoring, etc.)
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Permit No. WA-000179-1
Issuance Date: July 8, 2003
Effective Date: July 8, 2003
Expiration Date: April 30, 2008

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT No. WA-000179-1

State of Washington
DEPARTMENT OF ECOLOGY
Northwest Regional Office
3190 - 160th Avenue SE
Bellevue, WA 98008-5452

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

SHELL OIL PRODUCTS US
Shell Seattle Terminal
2555 - 13th Avenue SW
Seattle, WA 98134

Facility Location: 2555 - 13th Avenue SW Seattle, WA 98134 King County Cedar/Green WQMA	Receiving Water: Duwamish River West Waterway Class B
Water Body I.D. No.: 04-09-09	Discharge Location: Outfall 001: Latitude: 47° 34' 48" N Longitude: 122° 21' 04" W
Industry Type: Bulk Petroleum Storage and Distribution	Outfall 002: Latitude: 47° 34' 52" N Longitude: 122° 21' 13" W

is authorized to discharge in accordance with the Special and General Conditions which follow.

Kevin C. Fitzpatrick
Water Quality Section Manager
Northwest Regional Office
Washington State Department of Ecology

TABLE OF CONTENTS

GENERAL CONDITIONS

SUMMARY OF SCHEDULED PERMIT REPORT SUBMITTALS

Permit Section	Submittal	Frequency	First Submittal Date
S3.	Discharge Monitoring Report	Quarterly	October 15, 2003
S5A.	Operations and Maintenance Manual Update or Review Confirmation Letter	As necessary	
S7.	Updated Spill Plan	1/permit cycle	One hundred and eighty (180) days before permit expiration
S9.A	Acute Toxicity Characterization Data	1/permit cycle	Test begins by November 1, 2005 (report shall be submitted sixty [60] days after the sample date)
S10.A	Chronic Toxicity Characterization Data	1/permit cycle	Test begins by November 1, 2005 (report shall be submitted sixty [60] days after the sample date)
S11.	Updated Stormwater Pollution Prevention Plan	1/permit cycle	October 30, 2007
S12.A	AKART Analysis	1/permit cycle	June 30, 2004
S12.B	Engineering Report	1/permit cycle	August 31, 2004
S12.C	Construction and Startup	1/permit cycle	January 30, 2005
G1.	Notice of Change in Authorization	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	October 30, 2007

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge treated wastewater to the west waterway of the Duwamish River via city storm sewers, at the discharge location specified on page one of this permit. The Permittee is subject to meeting the following limitations:

EFFLUENT LIMITATIONS: OUTFALL 001 (Main Oil Water Separator)		
Parameter	**Average Monthly[a]**	**Maximum Daily[b]**
pH	Between the range of 6.5 and 8.5 standard units	
Oil and Grease	10 mg/L	15 mg/L
Oil and Grease	No oily sheen	
Total Suspended Solids (TSS)	21 mg/L	33 mg/L
Benzene	---	71 µg/L
Ethyl benzene	---	0.100 mg/L
Zinc (TR)	---	(1138 µg/L, Interim Limit)[c]

EFFLUENT LIMITATIONS: OUTFALL 002 (OWS located next to the warehouse)		
Parameter	**Average Monthly[a]**	**Maximum Daily[b]**
Oil and Grease	10 mg/L	15 mg/L
Oil and Grease	No oily sheen	

[a] The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample.

[b] The maximum daily effluent limitation is defined as the highest allowable daily discharge.

[c] The interim effluent limit for zinc is 1,138 µg/L. The final effluent limit shall be the acute marine water quality criterion for zinc (95 µg/L), effective February 1, 2005.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule

Outfall 001: Main oil/water separator (OWS) located northeast of the facility

Parameter[1]	Units	Minimum Sampling Frequency	Sample Type	Test Method[4]
Flow	gpd	Daily	Continuous	Estimated based on rainfall data
Oil and Grease	mg/l	Daily Monthly	Inspection Grab	Visual 1664
TPH-G	mg/l	Monthly	Grab	NWTPH-GX
BTEX	µg/L	Monthly	Grab	624
TSS	mg/L	Monthly	Composite[2]	160.2
Lead	µg/L	Monthly	Grab	200.7
Zinc[6]	µg/L	Monthly	Grab	200.7
Copper	µg/L	Monthly	Grab	200.7
Priority Pollutants[5]	µg/L	Annually	Grab or Continuous	625, 624, 608, 200, 335.2
pH	Standard Units	Daily[3]	Grab	150.1
Wet Testing		Quarterly	Grab	See Permit Conditions S9 and S10

[1] The final effluent sample point is defined as after the excelsior filler at the last chamber of the main oil water separator.

[2] The sampling method for TSS shall be a composite of four aliquots taken at two hour intervals on each sampling day.

[3] pH can be monitored in-house using pH paper or EPA Method 150.1. The results shall be recorded in a logbook, which make available for inspection.

[4] Method listed refers to "Methods for Chemical Analysis of Water and Wastes," U.S. Environmental Protection Agency, EPA-600/4-79-020, March 1979. See 40 CFR 136.3 (Table IB) for equivalent methods.

[5] A priority pollutant scan includes: semi-volatiles (organic acid extractables and organic base-neutral extractables), volatile organic analysis and metals, with the exceptionof PCB's. For a complete list of priority pollutants, see Appendix A. Metals include total arsenic, cadmium, copper, lead, mercury, nickel, silver, and zinc. Metals analysis shall be for total recoverable using AA furnace, unless the metal can be quantified using ICP (except cold vapor for mercury).

[6] Zinc shall be analyzed using EPA method 200.7 (Inductive Compled Plasma Emission Spectroscopy ICP) a detection limit of 0.02 mg/Lor less.

Outfall 002: OWS located west of the warehouse. An oil absorbent pad shall be installed in the third chamber of the OWS at all times. No monitoring is necessary for reporting periods during the summer months in which there is no discharge.

Parameter	Units	Sample Point[1]	Minimum Sampling Frequency	Sample Type
Flow	gpd	Final Effluent	Monthly	Estimated
Oil and Grease[2,3]	mg/L	Final Effluent	Monthly Daily	Grab Visual Inspection
pH[1]	Standard Units	Final Effluent	Monthly	Grab

[1] The final effluent sample point is defined as the clear well of the last chamber of the OWS.

[2] Sample shall be collected during the first 60 minutes of storm or as soon as possible thereafter, taking safety and staffing into consideration, to represent a first flush sample.

[3] The sampling frequency for oil and grease may be reduced to once/2 months upon written approval by the Department, if the test results show 8 consecutive months of compliance with effluent limitations. In the event of any noncompliance with effluent limitations, the frequency shall return to 1/month until another 8 months of compliance is demonstrated and written approval is granted by the Department.

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

C. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement.

Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Crops, soils, and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by the Department.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted quarterly. Monitoring results obtained during the previous three (3) months shall be reported on the monthly (one form shall be completed for each month) forms as provided, or otherwise approved, by the Department, and be received no later than the 15th day of the month following the completed reporting period, unless otherwise specified in this permit.

Priority pollutant analysis data shall be submitted no later than 45 days following the reporting period. The report shall be sent to the Department of Ecology, Northwest Regional Office, 3190 - 160th Avenue SE, Bellevue, Washington, 98008-5452.

All lab reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), lab practical quantitation limit (PQL), reporting units, and concentration detected.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2 of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the permit terms and conditions due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;

2. Repeat sampling and analysis of any violation and submit the results to the Department within thirty (30) days after becoming aware of the violation;

3. Immediately notify the Department of the failure to comply; and

4. Submit a detailed, written report to the Department within thirty (30) days (five [5] days for upsets and bypasses), unless requested earlier by the Department. The report should describe the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S4. UNANTICIPATED DISHARGES

Beginning on the effective date of this permit, the Permittee may discharge nonroutine wastewater on a case-by-case basis. Prior to any such discharge, the Permittee shall contact the Department and **at a minimum** provide the following information:

1. The nature of the activity that is generating the discharge.

2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.

3. The total volume of water expected to be discharged.

4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents specified by the Department. All discharges must comply with the effluent limitations established for Outfall 001, water quality standards, sediment management standards, and other limitations deemed necessary by the Department.

5. The rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits. The Permittee is responsible to contact the city to obtain the maximum acceptable discharge rate.

The discharge cannot proceed until the Department has reviewed the information provided and has authorized the discharged. Authorization from the Department will be by letter to the Permittee or by an administrative order.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Operations and Maintenance Manual

The Permittee shall review and update the Operations and Maintenance (O&M) Manual annually and confirm this review by letter to the Department. Substantial changes or updates to the O&M Manual shall be submitted to the Department whenever they are incorporated into the manual.

The approved Operations and Maintenance Manual shall be kept available at the permitted facility and all operators shall follow the instructions and procedures of this manual.

The O&M Manual shall include:

1. Emergency procedures for plant (oil/water separator, activated carbon systems, etc.) shutdown and cleanup in event of wastewater system upset or failure; and

2. Plant maintenance procedures.

B. Bypass Procedures

The Permittee shall immediately notify the Department of any spill, overflow, or bypass from any portion of the collection or treatment system.

The bypass of wastes from any portion of the treatment system is prohibited unless one of the following conditions (1, 2, or 3) applies:

1. Unavoidable Bypass—Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

If the resulting bypass from any portion of the treatment system results in noncompliance with this permit, the Permittee shall notify the Department in accordance with condition S3.E "Noncompliance Notification."

2. Anticipated Bypass That Has the Potential to Violate Permit Limits or Conditions--Bypass is authorized by an administrative order issued by the Department. The Permittee shall apply to the Department for the administrative order at least thirty (30) days before the planned date of bypass. The written submission shall contain: (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for a water quality modification, as provided for in WAC 173-201A-110, and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order:

a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.

b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request.

The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

3. Bypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions—Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by the Department prior to the bypass.

S6. SOLID WASTE DISPOSAL

A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

S7. SPILL PLAN

The Permittee shall submit to the Department an update to the existing spill control plan with the application for permit renewal one hundred and eighty (180) days prior to the expiration date of the permit.

The updated spill control plan shall include the following:

- A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.
- A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
- A list of all oil and chemicals used, processed, or stored at the facility, which may be spilled into state waters.

For the purpose of meeting this requirement, plans and manuals required by 40 CFR Part 112, and contingency plans required by Chapter 173-303 WAC may be submitted.

S8. BEST MANAGEMENT PRACTICES

1. The oil/water separators shall be inspected on a weekly basis at minimum and maintained as needed to ensure satisfactory performance. Oil sludges shall be disposed of in a manner that will not cause water quality degradation to state waters. A record of inspection, maintenance, and disposal shall be kept on file and available for review by the Department.

2. All stormwater runoff from the containment tank farm shall be directed to the existing oil/water separator for treatment prior to discharge. Stormwater runoff from the product transfer area shall be collected and treated through an activated carbon system prior to discharge to the main oil/water separator.

3. All detergent washing of vehicles shall be conducted on established wash racks which drains into the sanitary sewer.

4. In the event of an accidental discharge of oil, chemicals, toxic, or hazardous materials into waters of the state or onto land with a potential for entry into state waters, including groundwater, representatives of the Northwest Regional Office Spill Response Team shall be notified immediately (within 24 hours) at (425) 649-7000. A written spill report shall be submitted to the Department of Ecology, Water Quality Program, within five (5) days of the time the Permittee becomes aware of the circumstances, unless the Department waives or extends this requirement on a case-by-case basis.

5. No emulsifiers or dispersants and no fire suppression foam agents and wash water shall be released to the oil/water separators.

6. Contained, collected, or accumulated oils and solvents shall be discharged directly to the waste oil tank and not discharged to the oil/water separators or any sewer systems. Records or manifests for the waste oil disposal (hauling) shall be kept on-site and made available for inspection.

7. Best Management Practices shall be employed on the dock facilities to collect oil spillage when making and breaking hose connections, and to prevent spillage from all hoses, hose reels, and filler nozzles. Containment and other specialized oil cleanup equipment shall be available at all times for immediate emergency use.

8. Best Management Practices shall be employed on-site to reduce dust and debris by sweeping the area impacted by heavy vehicle traffic whenever weather permits.

9. All tank water drawn shall be hauled off-site for proper disposal.

10. Once during each pipeline receipt from the deck or via Olympic Pipeline, a walk through inspection shall be conducted on the transfer line starting from the manifold area and proceeding to the individual tank during the transfer process.

11. A daily inspection shall be conducted in the tank farm for leaks and spills.

12. Sludges, scales, and sediments from tanks shall be disposed of in an approved manner other than to waters of the state, and other then to the sanitary sewer system.

13. All barrels, drums, or similar containers containing toxic or deleterious materials, including, but not limited to petroleum products, organic solvents, resins, strong acids and bases, cyanides, and heavy metal salts, shall be stored in an upright position, in a bermed, covered area sufficient to prevent discharge into state ground or surface waters in the event of leakage or rupture.

14. Empty barrels shall be stored with all openings plugged, in an upright position, and at least twenty feet from a storm drain.

S9. ACUTE TOXICITY

A. Effluent Characterization

The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted quarterly for one (1) year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC_{50}). The percent survival in 100% effluent shall also be reported.

Testing shall begin by November 1, 2005. A written report shall be submitted to the Department within sixty (60) days after the sample date. A final effluent characterization summary report shall be submitted to the Department within ninety (90) days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Acute toxicity tests shall be conducted with the following species and protocols:

1. Silverside minnow, *Menidia beryllina* (96-hour static-renewal test, method: EPA/600/4-90/027F).

2. Mysid, *Americamysis (Mysiopsis) bahia* (48-hour static test, method: EPA/600/4-90/027F).

B. Effluent Limit for Acute Toxicity

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100% effluent is below 80%, or

2. Any one test of any species exhibits less than 65% survival in 100% effluent.

If an effluent limit for acute toxicity is required by Subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

In the event of failure to pass the test described in Subsection C of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in Subsection D are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100.

If the Permittee has an effluent limit for acute toxicity and the ACEC is not known, then effluent characterization for acute toxicity shall continue until the time an ACEC is known. Effluent characterization shall be continued until an ACEC has been determined and shall be performed using each one of the tests listed in Subsection A on a rotating basis. When an ACEC has been determined, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

If no effluent limit is required by Subsection B at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in Subsection E even if the ACEC is unknown.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in Subsection A above on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control.

The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement Subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in Subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. For intermittent discharges, testing shall be conducted on the next four discharge events using the same test and species as the failed compliance test. Testing shall determine the LC_{50} and effluent limit compliance. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous.

If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection.

The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication# WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria,* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria,* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication# WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.* If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standards of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S10. CHRONIC TOXICITY

A. Effluent Characterization

The Permittee shall conduct chronic toxicity testing on the final effluent. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin by November 1, 2005. A written report shall be submitted to the Department within sixty (60) days after the sample date. A final effluent characterization summary report shall be submitted to the Department within ninety (90) days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Effluent testing for chronic toxicity shall be conducted quarterly for one year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001. In accordance with Chapter 173-205-020, the ACEC and CCEC are equal to 100% in this permit.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

Saltwater Chronic Toxicity Test Species		**Method**
Topsmelt or Silverside minnow	*Atherinops affinis* or *Menidia beryllina*	EPA/600/R-95/136 or EPA/600/4-91/003
Mysid shrimp	*Holmesimysis costata* or *Mysidopsis bahia*	EPA/600/R-95/136 or EPA/600/4-91/003

The Permittee shall use the West Coast fish (topsmelt, *Atherinops affinis*) and mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

B. Effluent Limit Toxicity

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted under Subsection A results in an NOEC less than the ACEC or if any test shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). The Permittee shall complete all applicable requirements in Subsections C, D, and F upon determining that an effluent limit for chronic toxicity applies to the discharge.

If no test resulted in a NOEC less than the ACEC or if no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only Subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

The CCEC means the maximum concentration of effluent allowable at the boundary of a mixing zone assigned pursuant to WAC 173-201A-100.

C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in Subsection A above on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control.

The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement Subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under Subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three (3) consecutive months using the same test and species as the failed compliance test. For intermittent discharges, testing shall be conducted on the next three discharge events using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with

the effluent limit for chronic toxicity as described in Subsection C. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous.

If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within sixty (60) days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication# WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria,* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria,* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication# WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.* If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

S11. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

The Permittee shall submit to the Department an update to the existing Stormwater Pollution Prevention Plan (SWPPP) with the permit reapplication required in General Condition G7.

The Permittee shall modify the existing SWPPP whenever there is a change in design, construction, operation or maintenance which causes the SWPPP to be less effective in controlling pollutants. Whenever the description of potential pollutant sources or the pollution prevention measures and controls identified in the SWPPP are inadequate, the SWPPP shall be modified, as appropriate, within two (2) weeks of such determination. The proposed modifications to the SWPPP shall be submitted to the Department at least

thirty (30) days in advance of implementing the proposed changes in the plan unless the Department approves immediate implementation. The Permittee shall provide for implementation of any modifications to the SWPPP in a timely manner.

S12. COMPLIANCE SCHEDULE

The Permittee shall achieve compliance with the effluent limitations in accordance with the following schedule:

A. AKART Analysis

AKART is defined as all known, available, reasonable methods of prevention and treatment. No later than June 30, 2004, the Permittee shall submit an AKART analysis addressing the metal concentrations in the discharge which have exceeded or have the potential to exceed water quality criteria, to the Department for review and approval. The AKART analysis shall include an identification of all potential sources of metals in the discharge, an evaluation of the available methods for pollutant prevention and/or treatment for zinc, and other metals of concern such as copper. The analysis shall include a schedule for implementation of the preferred treatment option, and a description of the requirements necessary to meet the final effluent limits.

B. Engineering Report

If treatment is determined to be necessary from the above-referenced AKART analysis, the Permittee shall submit an engineering report with a schedule for construction and startup of the chosen treatment system, to the Department no later than August 31, 2004. The engineering report shall be consistent with all the requirements of Chapter 173-240 WAC.

C. Construction and Startup

If treatment is determined to be necessary from the above-referenced AKART analysis, the Permittee shall complete the construction and startup of the treatment system as designed above in part B, by January 30, 2005.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

A. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.

B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Department.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.

B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.

C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:

1. A material change in the condition of the waters of the state.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Materialand substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.

6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pretreatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7, of this section, and the Department determines that modification or revocation and reissuance is appropriate.

2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred and eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least one hundred and eighty (180) days prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies the Department at least thirty (30) days in advance of the proposed transfer date.

2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.

3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:
1) an upset occurred and that the Permittee can identify the cause(s) of the upset;
2) the permitted facility was being properly operated at the time of the upset;
3) the Permittee submitted notice of the upset as required in Condition S3.E; and
4) the Permittee complied with any remedial measures required under S5 of this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.

G22. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

G23. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Department as soon as they know or have reason to believe:

A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels":

1. One hundred micrograms per liter (100 µg/l).

2. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony.

3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).

4. The level established by the Director in accordance with 40 CFR 122.44(f).

B. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels":

1. Five hundred micrograms per liter (500μg/L).

2. One milligram per liter (1 mg/L) for antimony.

3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).

4. The level established by the Director in accordance with 40 CFR 122.44(f).

G24. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

FACT SHEET FOR NPDES PERMIT WA-000179-1(I)

SHELL OIL PRODUCTS US

Shell Seattle Terminal

TABLE OF CONTENTS

TABLE OF CONTENTS
(Continued)

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDESpermits), which is administered by the Environmental Protection Agency (EPA).. The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see *Appendix A--Public Involvement* of the fact sheet for more detail on the public notice procedures). Reasonable potential calculations are enclosed in Appendix B. Glossary is enclosed in Appendix C. Site maps are enclosed in Appendix D.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. Comments and the resultant changes to the permit will be summarized in *Appendix E--Response to Comments*.

GENERAL INFORMATION	
Applicant	Shell Seattle Terminal
Facility Name and Address	Shell Seattle Terminal 2555 – 13th Avenue SW Seattle, WA 98134
Type of Facility	Bulk Petroleum Storage and Distribution
SIC Code	5171
Discharge Location	Waterbody Name: Duwamish West Waterway Latitude: 47° 34' 34" N Longitude: 122° 21' 02" W
Water Body ID Number	04-09-09

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

INDUSTRIAL PROCESS

The Shell Seattle Terminal (Formerly Equilon) comprises 20.5 acres of land on the north central part of the island (Figure 1). The facility is divided into three parcels: the main terminal and tank farm (2555 13th Avenue SW), the north tank farm (1835 13th Avenue SW), and the shoreline manifold area and dock (1711 13th Avenue SW). Shell Oil Products US operates both the light oils distribution terminal and lubricants facility on the property.

The main terminal and tank farm are located on 17.5 acres lying west of 13th Avenue SW, south of SW Florida Street, east of 16th Avenue SW and north of SW Lander Street. The main facility consists of two office buildings, a warehouse, a former bottle filling building, a blending building, a light oil truck loading rack, a lube oil truck loading rack, pipeline receiving facilities, rail receiving facilities, two regulated underground storage tanks (commingled tank and vapor drop out tank), 83 aboveground product storage tanks, piping, pumps, a boiler, and a garage. The main terminal is constructed on fill material. The main terminal receives primarily light oils (fuel), via barge, rail, truck and pipe line (Olympic Pipe Line from Anacortes), and lube oils by truck and rail. Lube operations currently include storage and distribution.

The north tank farm comprises 2.5 acres immediately northwest of the intersection of 13th Avenue SW and SW Florida Street. This tank farm is constructed on fill material. The tank farm contains two aboveground storage tanks, both about 1,500,000 gallons in size, which currently store diesel fuel. The tanks receive product via pipelines from the Olympic Pipe Line, the main tank farm, and the dock. Product from these two tanks is also transferred to both the main terminal and the dock.

The shoreline mainfold and dock lie on 0.5 acres of land on the north side of the intersection of 13th Avenue SW and SW Massachusetts Street. Elliott Bay is adjacent to the north edge of the shoreline manifold area. Some of the manifold area is not paved. The area contains manifolds controlling the flow of product between the tank farms and the dock. The dock lies 250 feet to the west of the shoreline manifold area and extends 590 feet into Elliott Bay, and is known as Pier 15, which is shared by Rainier Petroleum Company. Combinations of barges and ships are handled at the dock.

The amount of product handled fluctuates seasonally with sale price and number of participating distributors purchasing from the facility. Products distribution through the loading rack is via tanker trucks.

The loading equipment of the loading rack in the main terminal is equipped with a vapor recovery unit for the control of gasoline vapors. The recovered vapor condensate is returned into the product tanks.

Petroleum Products

Shell Seattle Terminal handles two main types of petroleum products: light oils and lubricating oils. Light oils include three grades of gasoline—aviation gasoline, jet fuel, and middle distillates
(e.g. diesel #2).

Bulk lubricating oils are received as several grades of base stock (e.g. solvent neutral oils and pale oils). These base oils consist of naphthenic, paraffinic or both, and light to heavy petroleum distillates. The facility has blended, distributed, and packaged lubricating products since 1948. Lubricating products blending ceased in March 1994. Hard greases are received prepackaged and are distributed by the Shell Seattle Terminal.

Base oils are received by truck and rail, blended, and distributed via truck. Historically, lubricating base oils have also been shipped via rail. Light oils are received via the Olympic Pipe Line, marine tanker or barge or by rail. They are stored on site and shipped via truck or marine vessel, tanker or barge.

Chemical and Additive Management

The facility has used in the past very small amounts of additives to blend both light oil and lubricating oil products. These additives generally consist of detergents, anti-rust compounds, lubricants, viscosity index improvers, anti-foaming agents, and gasoline additives.

TANKS

Storage tanks were first installed on site in 1947 and continue to be installed on an as needed basis for expansion. The last tank installed was in 1992. Some tanks have been retrofitted with double bottoms throughout the years. Dome covers have been installed over the original open floating roof to eliminate stormwater from seeping into the product tank. The total bulk storage capacity for the facilities at the north and main tank farm for the facility is 713,000 barrels (bbl). This includes 84 aboveground storage tanks. Tank sizes range from 4200-gallon capacity to 4,746,000-gallon capacity.

The tanks are connected via twelve transfer lines to the dock. Transfer points are at two locations on the east side of the pier. Product movement is controlled at these two points by valves on individual lines. Also block valves control movement of product off the pier at the shore end, as well as in the tank farm 1/4 miles south (Figure 2). Most of these lines are buried underground. A small portion of the line is exposed aboveground.

WASTEWATER AND EXISTING TREATMENT SYSTEMS

Stormwater from the pier is discharged to the sanitary sewer system through Rainier Petroleum Company's discharge permit with Metro King County. The facility does not receive or treat ballast water or gray water from ships.

Wastewater generated from the facility is mostly stormwater which has been impacted by daily industrial activities, boiler blowdown, sump overflow, condensed cooling water, and washdown rinse water from loading racks. According to the facility, tank drawn water is currently collected and hauled back to the Anacortes Shell Refinery or disposed by a regulated treatment storage or disposal facility. The storm runoff and the washdown rinse water from the light products loading racks are collected and pretreated through an oil/water separator (OWS), equalization tank, and activated carbon system. The installation of this system was completed in the winter of 1994/1995. The storm runoff from the south tank farms, from most areas of the site including lube oil loading rack and the pretreated water from the light product loading rack are gravity fed to the main OWS. Most of the areas in the main terminal are paved, including the lube oil tank farms and excluding the main and north tank farms. The main OWS is an API OWS which consists of five chamber compartments with an excelsior filtration media and calcium carbonate rocks installed in the last chamber compartment prior to the outfall (Outfall 001).

Truck/car detergent wash water and domestic wastewater are discharged to the Metro King County system.

DISCHARGE OUTFALLS

The facility has a total of two outfalls. Outfall 001 is the main oil/water separator (OWS) outlet. Outfall 002 is the outlet of another OWS located adjacent to or north of the warehouse.

Outfall 001 discharges treated effluent from the main OWS to the Duwamish West Waterway via city storm sewers (SW Lander CSO/SD 105). This wastewater is impacted by industrial activities. Therefore, requirements will be set in this permit to regulate this discharge.

Outfall 002 discharges treated storm runoff collected in an OWS. This OWS receives runoff from the roadway and parking area for trucks which are waiting to be loaded and unloaded from the warehouse for full package container products. The gravity fed OWS for this outfall consists of three compartments. Outfall 002 discharges storm water runoff into the city of Seattle storm drain along SW 16th Avenue which ultimately discharges to the Duwamish West Waterway.

Storm water runoff from the north tank farm infiltrates into the ground. No surface water runoff has been reported for this area. Therefore, no monitoring requirement will be included except for BMPs. This runoff will be addressed in the facility's Stormwater Pollution Prevention Plan (SWPPP).

PERMIT STATUS

The previous permit for this facility was issued on July 31, 1997. The previous permit placed effluent limitations on oil and grease, total suspended solids (TSS), benzene, ethyl-benzene, and pH.

An application for permit renewal was submitted to the Department on December 13, 2001, and accepted by the Department on July 9, 2002.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 26, 2001. During the history of the previous permit, the Permittee had the following exceedances based on Discharge Monitoring Reports (DMRs) submitted to the Department:

Outfall	Parameters	Type of violation	Exceedance Month
001	Oil & Grease	Daily Maximum	01/99
002	Oil & Grease	Daily Maximum	1/00
	Oil & Grease	Monthly Average	1/00
001	TSS	Daily Maximum	12/00
	TSS	Monthly Average	01/01
001	pH	Outside the range of 6.5 to 8.5 standard units	12/97 through 7/98, 9/98 through 01/00, 3/00 through 6/00, 9/00 through 10/00, 7/01, 9/01

The TSS violations above have already been corrected. On August 25, 2000, the Department issued a Notice of Violation (NOV) No. DE 00WQNR-1421 for the pH, and oil & grease violations which occurred during the period of January 1, 1999 through December 31, 1999. On September 8, 2000, Shell Seattle Terminal submitted a response to the above NOV indicating that corrective actions had been t aken in January 1999 for the oil & grease violation. The subsequent sample results indicated an oil& greaseconcentration less than the detection limit. The pH values associated with the above violations were less than the minimum limit of 6.5 standard units. These low readings were due to the naturally acid rainwater which occurs in the northwest region. The facility provided pH data collected for the natural rainwater to support this. Furthermore, the facility also volunteered to provide treatment for pH prior to discharge. The treatment involves adding a catch basin insert filled with calcium carbonate, which is to be placed in an existing cage located in the clearwell of the main oil water separator. The spent calcium carbonate will be replaced as often as required. This proposed treatment method was implemented during spring of 2001. A No Action Order was issued to the facility on January 5, 2001, to close out the above NOV.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge has been characterized for the following regulated parameters:

Outfall 001

Parameters	**Maximum Detected Values** () for Outfall 002	Average **Detected values**	**Units**
TSS	40 (10)	12.1	mg/L

Parameters	Maximum Detected Values () for Outfall 002	Average Detected values	Units
pH	7.8 (7.2)		s.u.
Oil & Grease	10.6	3.68	mg/L
BOD	4.19 (3.81)		mg/L
COD	24.7 (30.3)		mg/L
Total Copper (Cu)	31.1 (22.5)	21.5	µg/L
Total Lead (pb)	90.6 (262)	56.6	µg/L
Total Zinc (zn)	224 (97.5)	121.7	µg/L
Total Arsenic (As)	3.27 (<10)	2.5	µg/L
Benzene	3.03	0.75	µg/L
Ethyl Benzene	1.22	0.56	µg/L
TPH-G	51	27.17	µg/L

The stormwater flow reported in the application for Outfall 001 is approximately 11,125 gpd, and Outfall 002 is approximately 3,000 gpd. Condensed cooling water and boiler blow down and sump overflow is estimated to be 2300 gpd, and wash down/rinse water and stormwater from loading areas are estimated to be 825 gpd.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC), sediment quality standards (Chapter 173-204 WAC), or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis and the limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent.

Some pollutants are not treatable at the concentrations reported and they are not controllable at the source and they do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based limitations are set by regulation in the federal effluent guidelines or on a case-by-case basis using Best Professional Judgment (BPJ) when no effluent guidelines exist for an industrial category. Technology-based limits represent the best treatment a facility can achieve consistent with the economic means of the industry as a whole (in the case of effluent guidelines) or of the specific facility being permitted (in the case of BPJ). Technology-based effluent limits are process control parameters or numbers which indicate that a process, which in this case is wastewater treatment, is not functioning properly. All known available and reasonable methods to control toxicants in the Permittee's wastewater are required to be used.

EFFLUENT LIMITATIONS

The technology-based effluent limitations in this permit are as follows:

Outfall	Parameter	Monthly Average	Daily Maximum
001	Oil & Grease	10 mg/L	15 mg/L
	TSS	21 mg/L	33 mg/L
	Ethyl-benzene	--	0.1 mg/L
002	Oil & Grease	10 mg/L	15 mg/L

The oil & grease limit is set consistent with the Department's policy for Direct Discharge which is based on the proven performance of gravity oil/water separators.

The TSS limit has remained unchanged from the previous permit (performance-based limit).

The ethyl benzene limit has remained unchanged from the previous permit.

For Outfall 001, the monitoring frequency for oil & grease, TSS, TPH-G, BTEX will be monthly during the discharge period. The total flow will be required to be estimated during the discharge period. An annual priority pollutant scan is required.

For Outfall 002, the monitoring frequency for oil & grease will be monthly during rainy season. The sample is required to be obtained during the first 60 minutes of a storm or as soon as possible thereafter, taking safety and staffing into consideration, to represent a first flush sample. No monitoring will be necessary during the reporting period if there is no discharge.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established surface water quality standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health.

Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The Washington State's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall be protected. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known available and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria. There are no mixing zones granted to this facility in this permit at this time.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Duwamish River West Waterway which is designated as a Class "B" receiving water in the vicinity of the outfall. Other nearby point source outfalls include Todd Shipyard and other industries located on Harbor Island. Characteristic uses include the following:

> water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

The 1994 Section 305(B) report described the Duwamish River as water quality impaired for secondary contact recreation and wildlife habitat, due to ammonia, pH, dissolved oxygen/organic enrichment, thermal modifications, and fecal coliform/other pathogen indicators. These pollutants are attributed to combined sewer overflow events, urban runoff and storm sewers, other sources (unspecified) and natural sources.

The Duwamish River is also included on the 1996 EPA 303(d) list for exceeding dissolved oxygen and fecal coliform water quality standards. The 303(d) list also reports that sediments exceed the sediment quality standards for copper, lead, zinc, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and sediment bioassay.

Chapter 173-201A WAC classifies the Duwamish West Waterway as a freshwater environment. According to the Water Quality Assessment conducted by King County Department of Natural Resources in October 1995, when freshwater inflows exceed 1,000 cfs, the maximum intrusion length of the salt wedge is approximately the East Marginal Way Bridge, regardless of tide height. At low freshwater flows (less than 600 cfs) and tide heights greater than 10 feet above Mean Lower Low Water (MLLW), the salt wedge can extend approximately 16 km upstream from the mouth. As the tide height increases, the salt wedge starts moving upstream and the downstream freshwater flow starts to decay (the two flows oppose each other) until at some point all water is flowing upstream, fresh water and salt water. For this finding, the receiving water in the vicinity of the outfall will be considered marine water in this permit. The chronic testing species for whole effluent toxicity requirement will be those of marine water.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA, 1992).

WATER QUALITY-BASED EFFLUENT LIMITS FOR NUMERIC CRITERIA

The water quality-based effluent limit set in this permit is as follows:

Outfalls	Parameter	Effluent Limit
001	pH	between 6.5 and 8.5 standard units
001	Zinc (TR)	95 µg/L (effective February 1, 2005)

The monitoring frequency for Outfall 001 is daily and for Outfall 002 is monthly.

According to Chapter 173-201A, the Duwamish River West Waterway is classified as fresh water receiving water. The water quality criteria for pH in a Class "B" fresh water environment is between 6.5 and 8.5 standard units.

A reasonable potential to exceed the acute marine water quality criterion for zinc (95 µg/L, total recoverable) was determined during the drafting process of the previous permit. However, the determination was based on one sample reported in the permit application at that time. Although, an effluent limit for zinc was not imposed in the previous permit, a compliance schedule for additional best management practices was set, and continued monitoring was required. The source of zinc was determined in the previous permits to result from truck traffic into the plant. A reasonable potential calculation was performed again using the data submitted between July 1, 1997 and March 2003, to determine whether the effluent concentrations for zinc have a reasonable potential to exceed the water quality criteria as required by 40 CFR 122.44 (d). As illustrated in Appendix B, Attachment I, based on the upper 95th percentile of confidence level of the effluent data (159 µg/L using a log normal distribution), a reasonable potential to exceed the acute marine water quality criterion (95 µg/L) exists. As a result, an effluent limit for zinc will be set in this permit. However, the Department recognizes that the facility may not be able to meet this water quality-based limit at the time the permit is issued to the facility. Therefore, the Department proposes to set a compliance schedule in the permit for the facility to evaluate the current BMPs, conduct source control, and or design a treatment method for zinc as necessary. The effluent limit for zinc will become effective eighteen (18) months from the issuance date of this permit.

The Department will not impose an effluent limit for copper in the permit at this time because of the following reasons: 1) The soil at Harbor Island (superfund site) is known to be contaminated with metals (copper, lead, arsenic, etc.) from the smelter which previously existed there; 2) EPA Region X is currently conducting cleanup activities at the site (More information is presented under the section entitled Ground Water Quality Limitations on page 16 of the Fact Sheet). After the EPA's cleanup is completed and the contaminated metals are contained on site, the Department will reevaluate the need to impose effluent limits for metals (based on water quality criteria) in the permit. Monitoring-only is required for copper and lead in this proposed permit.

Whole Effluent Toxicity

The water quality standards for surface waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC_{50}, EC_{50}, IC_{25}, etc. All accredited labs have been provided the most recent version of the Department of Ecology Publication# WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* which is referenced in the permit. Any Permittee interested in receiving a copy of this publication may call the Department Publications Distribution Center (360-407-7472) for a copy. The Department recommends that permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

An effluent characterization for acute toxicity was conducted during the previous permit term and showed toxicity in excess of the acute toxicity performance standard. However, the results of this characterization are not representative of the discharge's potential toxicological effects in the marine receiving water and the effluent characterization for acute toxicity must be repeated. The original effluent characterization used freshwater organisms for acute testing and marine organisms for chronic testing. The low level of dissolved solids in the stormwater samples enhanced the metals toxicity causing fathead minnows in the acute tests to have nearly complete death in 100% effluent at the end of four days. A marine fish, the topsmelt, used in the chronic tests had nearly complete survival in 100% effluent at the end of seven days because the salts used in the test moderated the toxicity from metals. The chronic tests were more sensitive because of the longer duration of exposure and better represented the receiving water which is marine. In order to verify this explanation and assess the effects on mysids, the permit requires the effluent characterization for acute to be repeated with marine organisms. As a result, chronic toxicity testing with marine organisms should also be repeated.

Shell Seattle Terminal (Harbor Island) Acute WET Test Results as % Survival in 100% Effluent						
Test#	**Lab**	**Sample Date**	**Start Date**	**Organism**	**Endpoint**	**% Survival**
AQTX1518	EVS	11/12/1997	11/13/1997	Daphnid	48-hr survival	0.0%
AQTX1517	EVS	11/12/1997	11/13/1997	Fathead	96-hr survival	0.0%

				minnow		
AQTX1519	EVS	11/17/1997	11/18/1997	Daphnid	48-hr survival	0.0%
AQTX1816	EVS	03/26/1998	03/26/1998	Fathead minnow	96-hr survival	45.0%
AQTX1817	Parametrix	03/31/1998	04/01/1998	Daphnid	48-hr survival	60.0%
AQTX1857	EVS	06/24/1998	06/25/1998	Daphnid	48-hr survival	5.0%
AQTX1858	EVS	06/24/1998	06/24/1998	Fathead minnow	96-hr survival	5.0%
AQTX1975	EVS	09/23/1998	09/23/1998	Daphnid	48-hr survival	95.0%
AQTX1974	EVS	09/23/1998	09/23/1998	Fathead minnow	96-hr survival	100.0%
AQTX002652	Parametrix	07/16/2001 12:30	07/17/2001 16:00	Mysid	24-hr survival	85.0%
AQTX002651	Parametrix	07/16/2001 12:30	07/17/2001 14:45	Topsmelt	96-hr survival	100.0%
AQTX003404	Parametrix	10/10/200112:10	10/10/2001 16:20	Mysid	48-hr survival	100%
AQTX003405	Parametrix	10/10/2001 12:10	10/10/2001 16:20	Topsmelt	48-hr survival	98%

Shell Seattle Terminal (Harbor Island) Chronic WET Test Results as NOEC/LOEC in % Effluent

Sample Date	Start Date	Organism	Test Type	Endpoint	NOEC	LOEC	MDSp
11/12/1997	11/13/1997	Topsmelt	Growth-survival (7d)	7-day Survival	100	> 100	
				Biomass	100	> 100	13.55%
				Weight	100	> 100	13.55%
12/03/1997	12/04/1997	Mussel	Development-Survival	Proportion Normal	100	> 100	10.37%
				Proportion Survived	100	> 100	5.30%
03/26/1998	03/26/1998	Mussel	Development-Survival	Proportion Normal	100	> 100	6.64%
				Proportion Survived	100	> 100	13.55%
03/26/1998	03/26/1998	Topsmelt	Growth-Survival (7d)	7-day Survival	100	> 100	5.99%
				Biomass	100	> 100	17.20%
				Weight	100	> 100	13.31%
06/24/1998	06/24/1998	Mussel	Development-Survival	Proportion Normal	15.5	31.1	2.91%
				Proportion Survived	15.5	31.1	8.52%
06/24/1998	06/24/1998	Topsmelt	Growth-Survival (7d)	7-day Survival	100	> 100	3.20%
				Biomass	100	> 100	12.90%
				Weight	100	> 100	11.00%
09/23/1998	09/23/1998	Mussel	Development-Survival	Proportion Normal	68.6	> 68.6	2.20%
				Proportion Survived	17.2	34.3	8.03%
09/23/1998	09/23/1998	Topsmelt	Growth-Survival (7d)	7-day Survival	100	> 100	0.00%
				Biomass	100	> 100	11.10%
				Weight	100	> 100	11.10%
07/16/01, 12:30	07/17/01, 11:00	Mussel	Development-Survival	Proportion Normal	17.5	35	1.09%
				Proportion Survived	70	>70	12.42%
07/16/01, 12:30	07/17/01, 14:45	Topsmelt	Growth-Survival (7d)	7-day Survival	100	> 100	17.52%
				Biomass	100	> 100	19.34%
				Weight	100	> 100	23.58%
10/10/01, 12:10	10/11/01, 15:30	Mussel	Development-Survival	Proportion Normal	70	>70	3.26%
				Normal Survival	35	70	NR
10/10/01, 12:10	10/11/01, 16:20	Topsmelt	Growth-Survival (7d)	7-day Survival	100	>100	NR
				Biomass	100	>100	22.5%

NR= Not Reported

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

Benzene is the pollutant of concern for this facility. The benzene concentration in the effluent has varied throughout the term of the previous permit. Since December 1995, after the pretreatment system (activated carbon system) was installed, the results for benzene reported have been consistently low, ranging from 0.0005 to 0.018 mg/L. The Department has made the determination to not set a performance-based limit for benzene at this time due to the short duration of consistent data. The benzene effluent limit set in this permit will be based on the numeric human health-based criterion of daily maximum of not exceeding 71 µg/L for Outfall 001. The monitoring frequency will be monthly.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the sediment management standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated ground water quality standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

USEPA Region X conducted island-wide groundwater studies and groundwater contaminant modeling as part of the Harbor Island Remedial Investigation (RI). RI findings include: 1) groundwater flows in a radial pattern in the center of the island, 2) dissolved-phase organic compounds (i.e., benzene) will not reach Elliott Bay or the Duwamish River at concentrations above surface water cleanup levels, and 3) surface water criteria rather than drinking water standards will be used to determine protection of groundwater since there is no current or planned future use of groundwater beneath Harbor Island for drinking water purposes. EPA's conclusions were verified during the RI data collection and site-specific modeling conducted by Shell under its Agreed Order with the Department of Ecology (the Department). The Department's Toxic Cleanup Program also conducted independent contaminant transport modeling and has also reached the same conclusions.

Shell Seattle Terminal will be implementing a cleanup action at the site. The cleanup action includes:

- Excavation of soil above cleanup levels in selected areas of the site
- Maintenance of protective gravel caps

- Free product recovery and reuse or disposal
- Vapor extraction for enhanced product recovery
- Long-term groundwater monitoring to check the fate and transport modeling, the current groundwater quality data in the compliance wells, and the Cleanup Action Plan
- Additional testing (bioassay) or further remedial actions (e.g. air sparging) will be evaluated as part of an overall response action in the event that the groundwater cleanup action levels are exceeded
- Institutional controls including access controls and deed restrictions

In addition to implementing the cleanup action under MTCA, Shell Seattle Terminal implements Best Management Practices (BMPs) and periodic/refresher training on spill prevention as part of the facility's operations. The facility's BMPs, described in the facility's Spill Prevention Control and Countermeasure (SPCC) Plan, Stormwater Pollution Prevention Plan, NPDES Permit Operation and Maintenance Plan, and Facility Oil Handling Manual, are conducted to prevent releases to groundwater and surface water. BMPs at the facility include: 1) visual inspections in tank farms, 2) pressure monitoring during product receipts, 3) visual inspections during product transfers, 4) hydrostatic testing of pipelines, 5) internal tank cleaning and inspections, 6) external tank inspections, 7) cathodic protection system inspections, 8) high & high/high liquid level alarm inspections, 9) pump inspections, 10) containment integrity inspections, and 11) gauging/inventory reconciliation before, during, and after product transfer.

Due to the above reasons, the Department has determined not to require installation of a liner at the main and north tank farms during this permit term.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

Monitoring for toluene, zylene, and flow is being required to further characterize the effluent. These pollutants could have a significant impact on the quality of the surface water.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-220-210).

Monitoring for toluene, xylene, and flow are being required to further characterize the effluent. These pollutants could have a significant impact on the quality of the surface water.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SOLID WASTE DISPOSAL

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee shall discharge no leachate of solid waste to waters of the state.

OPERATION AND MAINTENANCE MANUAL (O&M)

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system [40 CFR 122.41(e)] and WAC 173-220-150 (1)(g). It has been determined that the implementation of the procedures in the O&M Manual is a reasonable measure to ensure compliance with the terms and limitations in the permit.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Permit Condition S11 requires the Permittee to update the SWPPP.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit.

Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for a period of five (5) years in order to be consistent with the state basin planning schedule for the Cedar/Green Basin.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Permit Application submitted to the Department on December 13, 2001.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on September 3 and September 10, 2002, in the *Seattle Times* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on May 31, 2003 in the *Seattle Times* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
WA State Department of Ecology
Northwest Regional Office
3190 - 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7201, or by writing to the address listed above.

ATTACHMENT I

DETERMINATION OF REASONABLE POTENTIAL

STEPS TO MAKING REASONABLE POTENTIAL DETERMINATION:

1. **Calculate Ambient Water Quality Criteria (WQC) For Zinc As Total Recoverable.**

The total recoverable receiving water criteria (µg/L) are calculated as:

Pollutant	Marine Water* Acute	Marine Water* Chronic
Zinc	95	85.6
* Water quality criteria as total recoverable metal (µg/L).		

The acute and chronic marine water criteria for zinc (dissolved) are given in FR Vol. 60, No. 86 as 90 µg/L, and 81 µg/L, respectively. The total recoverable value is calculated by dividing the dissolved criteria by the conversion factor of 0.946. Since the monitoring data submitted represents total recoverable zinc, these criteria were converted to be presented as total-recoverable zinc.

2. **Calculate Maximum Expected Concentration (MEC).**

Effluent Sample Results as Total Recoverable metal:

DATE	OUTFALL	PARAMETER	UNIT	TYPE	VALUE
8/1/1997	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	98
9/1/1997	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	286
10/1/1997	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	350
11/1/1997	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	273
12/1/1997	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	228
1/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	254
2/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	436
3/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	236
4/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	173
5/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	223
6/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	419
7/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	149
9/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	51.9
10/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	253
11/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	194
12/1/1998	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	316
1/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	213
2/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	205
3/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	168
4/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	202
5/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	305
6/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	124

DATE	OUTFALL	PARAMETER	UNIT	TYPE	VALUE
7/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	204
8/1/1999	001	ZINC,TOTAL RECOVERABLE	µg/L	MAX	322
10/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	5
11/1/1999	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	318
12/1/1999	001	ZINC,TOTAL RECOVERABLE	µg/L	MAX	696
1/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	256
2/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	208
3/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	321
4/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	83.3
5/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	247
6/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	55.5
8/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	48.6
9/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	28.7
10/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	339
11/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	38
12/1/2000	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	129
1/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	174
2/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	161
3/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	82.3
4/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	202
5/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	118
6/1/2001	001	ZINC,TOTAL RECOVERABLE	µg/L	MAX	57.6
7/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	224
8/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	79.7
9/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	42
10/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	153
11/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	196
12/1/2001	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	220
1/1/2002	001	ZINC, TOTAL RECOVERABLE	µg/L	MAX	216
2/1/2002	001	ZINC,TOTAL RECOVERABLE	µg/L	MAX	245

The analytical method used for zinc was EPA method 200.7, an ICP method which has a detection limit of 10 µg/L.

The upper 95th percentile confidence level of the effluent samples values is 159 µg/L, based on a lognormal distribution and the assumption that the nondetect values are equal to half of the detection limit. The MEC exceeds the acute marine water quality criterion (acute marine water quality criterion was used for stormwater runoff). Therefore reasonable potential does exist, and a limit is required for zinc.

APPENDIX C—GLOSSARY

Acute Toxicity—The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART—An acronym for "all known available and reasonable methods of treatment."

Ambient Water Quality—The existing environmental condition of the water in a receiving water body.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass—The intentional diversion of waste streams from any portion of a treatment facility.

Chronic Toxicity—The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)—The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Daily Maximum Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Engineering Report—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Mixing Zone—An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)—The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/state permits issued under both state and federal laws.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

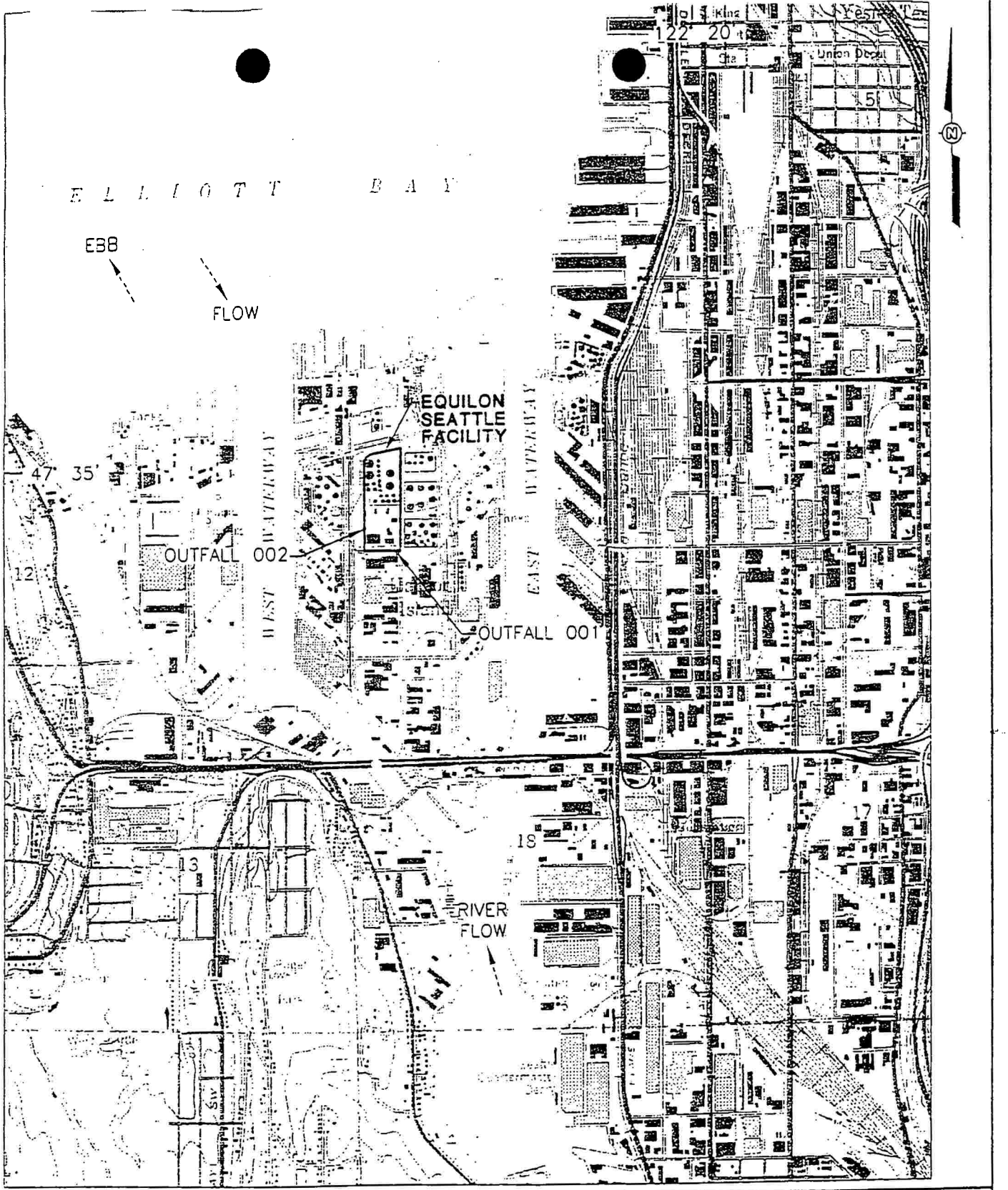
Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset—An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.



OFFICE	CHECKED BY	APPROVED BY	DRAWING NUMBER
BOTHELL			809829

IMAGE Files: harborisle1.bmp
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WASHINGTON

SCALE
0 2000 4000 FEET

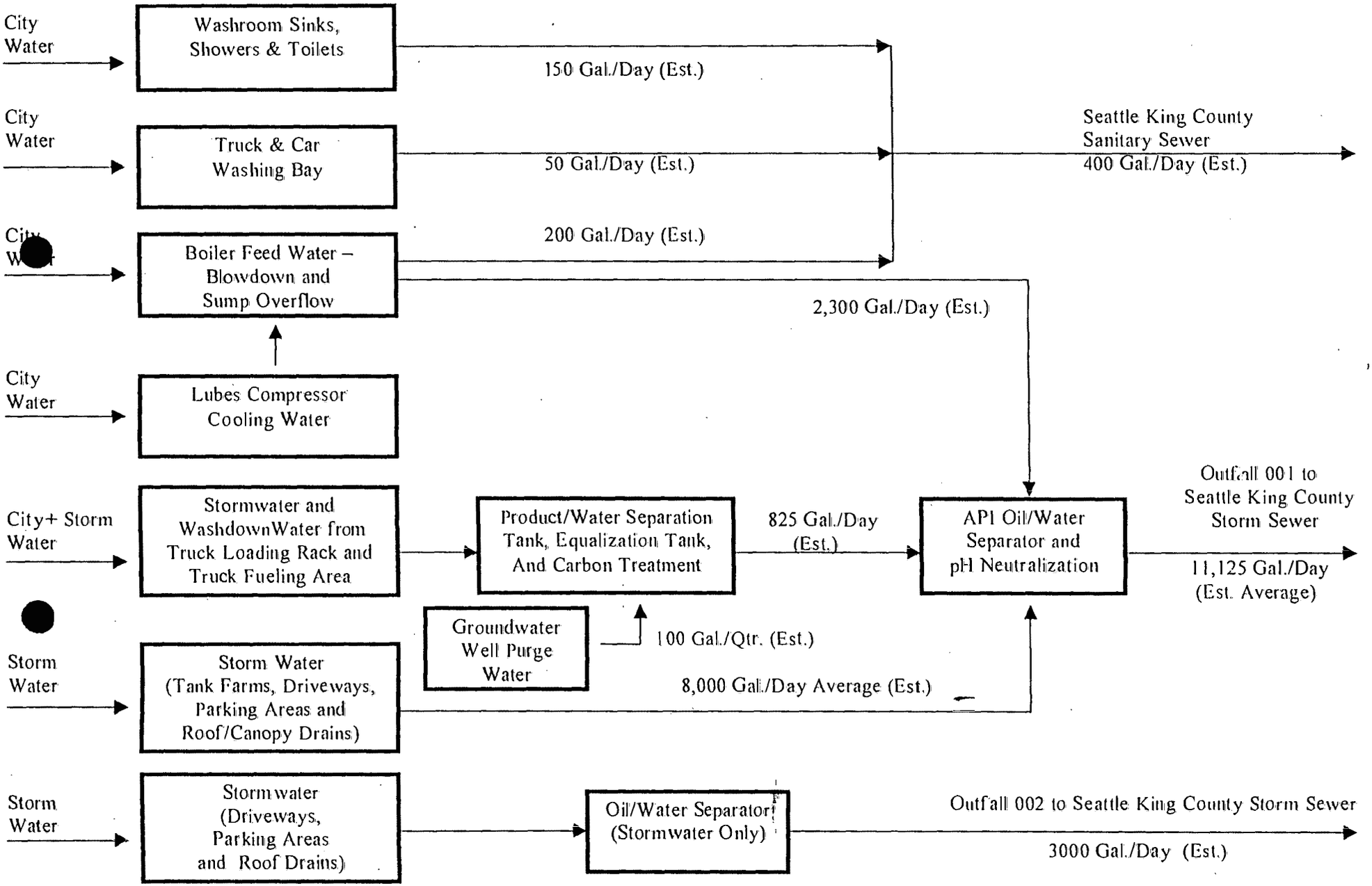
SOURCE:
U.S.G.S. 7.5 Min. Quadrangle, SEATTLE SOUTH, WA - REVISED 1973.

IT CORPORATION
3350 Monte Villa Parkway
Bothell, Washington 98021-8972
(425) 485-5000 Fax. (425) 951-4808

LOCATION MAP

EQUILON DISTRIBUTION TERMINAL
SEATTLE, WASHINGTON

SCHEMATIC OF WATER FLOW
EQUILON SEATTLE DISTRIBTUION TERMINAL
2555–13TH AVENUE, SW, SEATTLE, WA 98134, KING COUNTY



December 04, 2001

NOTE: The Seattle King County Storm Sewer discharges to the West Waterway of the Duwamish River.

APPENDIX E—RESPONSE TO COMMENTS

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 27, 2003

Mr. Christopher S. Allard
Terminal Manager
Shell Oil Products US
2555-13th Avenue SW
Seattle, WA 98134

Dear Mr. Allard:

Re: Responses to Comments on Draft Permit No. WA-000179-1
Shell Seattle Terminal (Shell)

Thank you for your comments on the above-referenced permit and fact sheet. A thorough review has been made of your comments dated June 24, 2003, and the Department offers the following responses. The following responses are outlined in the same format as presented in your letter.

Response to Preliminary Comments

Thank you for considering the Department's request on expediting your comments to the Department on the above-referenced permit. Technically and legally, Shell has a comment period of 30 days, beginning June 1, 2003 and ending June 30, 2003. Despite the Department's request to receive Shell's comments earlier, the Department will accept all comments received by 12 AM of June 30, 2003.

Please note that both the federal and state regulations pertaining to the NPDES Program do not required the Department to provide an entity review period for the Permittee prior to publishing for public notice. The Department chooses to provide an entity review period for the Permittee when time allows. The Department intends to issue this permit by June 30, 2003 if possible, as this timeline commitment has been previously made with EPA. If complications arise which prevent the issuance of the above referenced-permit by that date, the Department will postpone the issuance of the permit. The permit will not be issued until all comments received by June 30, 2003 are responded to. The Department apologizes for not being able to provide a longer entity review period to Shell. Please note that the entity review period is a period offered at the Department's discretion to the Permittee to review the draft permit and fact sheet for factual information presented in the documents. The entity review period is not allowed to be used for negotiation of the permit conditions.

The compliance schedule was missing in the first draft we sent you. This was discussed with your staff-members, Frank Takahashi and Carlton Jordon, during a conference call on June 2, 2003. The corrected version of the permit and fact sheet were sent to you by mail on May 30, 2003, and an electronic copy of both documents were sent to you again on June 2, 2003.

Major Issues of Concern:

1 The compliance period that the Department allows in a permit for completion of an AKART analysis, an engineering report, and construction for the chosen treatment as recommended in the AKART report, if any, is generally a period of 18 months. Experience with a majority of the facilities has demonstrated that this period is achievable. However, as discussed in our conference call on June 19, 2003, the Department may extend the compliance period if the Permittee encounters unforeseen complications during the process, following submittal of a written request with supporting details from the facility. In this case, the Department will accommodate the cleanup schedule that Shell is undergoing with TCP, to such extent as possible and reasonable. Until the Department receives justification (reasoning with a detailed schedule) from Shell as mentioned above, the total compliance period will remain as an 18 month-period in the permit as previously proposed in our conference call:

AKART Analysis	June 30, 2004
Engineering Report	August 30, 2004
Construction and Startup	January 30, 2005

There is no practical manner to set a narrative limit for zinc. The Department will derive a performance-based limit, using the formulas in Appendix E of the Technical Support Document (EPA 1991) and the submitted data between August 1997 and March 2003, as an interim daily maximum effluent limit for zinc. The calculated performance-based effluent limit for zinc is 741ug/L, using a confidence level at the 99th percentile.

2 Your request of an extension to conduct toxicity testing is reasonable. The Department will change the submittal date for both acute and chronic toxicity testing to November 1, 1995, after the AKART has been fully completed and implemented.

3 The newest EPA acute toxicity testing manual (EPA-821-R-02-012) only lists topsmelt *(Atherinops* affinis) as a supplemental acute toxicity test species. The manual contains no details on how to conduct an acute toxicity test with topsmelt. The EPA manual does list details for conducting acute toxicity tests with silverside minnows (*Menidia beryllina*). This silverside minnow acute toxicity test method has been used successfully here in the State of Washington and is a better choice than an untried topsmelt acute toxicity test method.

Mussels can be successfully conditioned to spawn at any time and are routinely used in toxicity testing year round. The 1995 Ecology publication is outdated. However, inclusion of the bivalve (oysters and mussels) test in the draft permit was an error. It has been deleted and only the fish and mysid chronic tests required. The table of Saltwater Chronic Toxicity Test Species and the following paragraphs have been revised as below. In addition, the West Coast mysid (*Holmesimysis costata*) has been removed since it is so rarely available that it has fallen from use here in the State of Washington.

Saltwater Chronic Toxicity Test Species		Method
Topsmelt	Atherinops affinis or Menidia	EPA/600R-95/136 or
or silverside minnow	beryllina	EPA-821-R-02-014
Mysid shrimp	Mysidopsis bahia	EPA-821-R-02-014

The Permittee shall use the West Coast fish, topsmelt (*Atherinops affinis*) unless the laboratory cannot obtain a sufficient quantity of topsmelt fish in good condition, in which case the East Coast fish, silverside minnow (*Menidia beryllina*) must be used instead. The East Coast fish may be substituted for the West Coast fish in chronic testing if use of the same fish species as in a concurrent acute test will result in a significant cost saving to the Permittee.

Reponses to Additional Comments on the Draft Permit:

Page	Response to Your Comments
4	Special Conditions S12.A, B, C will be listed on this table
~~14~~	BMP#7: If there is no drainage from the dock area to the receiving water or to the ground, the Department will remove this requirement from the permit. If there is, the requirement will stay. The Department was under the impression that the stormwater drainage from the dock goes to the Bay.
15	BMP#10: The typographical error will be corrected.
31	Condition G23: These general conditions are taken from the federal regulations 40 CFR. They are the same general conditions employed in all individual NPDES Permits that the Department issues. If G23 does not apply to Shell, then it would not effect Shell's operation. The Department's Water Quality Program does not allow any staff to make changes of the general conditions, as they have been carefully reviewed and approved by our Assistant Attorneys General.

Response to Comments on the Fact Sheet:

4	Factual errors can also be corrected during the public notice period. There is no requirement in federal or state regulations that requires the Department to provide an entity review period for the applicant. In most cases, the Department can extend the facility review period upon request if time allows.

	As mentioned on the first page of this response letter, Shell's public notice period will not end until June 30, 2003. Shell has until that date to submit comments to the Department.
5	Background Information: The last sentence will be corrected to read as suggested.
7	The last sentence of the first paragraph will be corrected as suggested.
7	The second sentence of the fifth paragraph will be removed since Outfall 002 does not receive roof drainage from the warehouse building.
8	The Summary of Compliance with the Previous Permit: 1 According to the Department's record, only the second page of the DMRs for outfall 001 was found for December 1997. The first page was missing for unknown reason and it never reached our staff for data entry. Please re-submit the December 1997 DMR for verification. The Department agrees to remove the violations pertain to "failure to report" for December 1997 in the fact sheet. 2 The monthly average exceedances listed for O&G on 10/00 and 01/01 are an error. They will be removed from the fact sheet. 3 The error on failure to report for TSS on 12/00 will be corrected to read "daily maximum exceedance". The reported value was 37 mg/L, the limit was 33 mg/L. 4 The pH range listed in this section will be corrected to read "6.5 to 8.5 s. u." Corrections for the violations discussed above will also be made in our WPLCS data base system.
9	Wastewater Characterization: The word "maximum" will be added to the heading of the column. A separate column will be created to list all the average concentrations as reported for the parameters.
10	The second paragraph: This paragraph was in the previous fact sheet which addressed the benzene exceedance occurred prior to July 1997. It should not be in this fact sheet. The Department will remove this paragraph.
15	Correction will be made to the tabular summary of bioassay results data. The errors could be data entry errors.

Please forward this response letter to Mr. Frank Takahashi, Shell Oil Products, as the Department does not have an address for Mr. Takahashi.

If you have additional questions, please contact me by e-mail at jtra461@ecy.wa.gov or by telephone at (425) 649-7078.

Sincerely,

Jeanne Tran, P.E.
Water Quality Program

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 30, 2003

Mr. Christopher S. Allard
Terminal Manager
Shell Oil Products US
2555-13th Avenue SW
Seattle, WA 98134

Dear Mr. Allard:

Re: Responses to Comments on Draft Permit No. WA-000179-1
Shell Seattle Terminal (Shell)

Thank you for your comments on the above-referenced permit and fact sheet. A thorough review has been made on your comments dated June 26, 2003, and the Department offers the following responses. The following responses are outlined in the same format as presented in your letter.

The Department recognizes your concern with having sufficient time to comment on the above-referenced permit and fact sheet. Please see the Department's responses on the response letter to comments dated June 24, 2003. The Department will accept all comments received by 12 AM of June 30, 2003, as the comment period will expire on that date.

Major Issues of Concern:

1 The Department intends to set a numeric limit based on the acute marine water quality criterion for zinc at the point of discharge because data has indicated that there is a reasonable potential to exceed the criterion for zinc in the effluent. If the Permittee demonstrates the discharge cannot consistently meet the water quality criterion for zinc at the point of discharge after AKART has been fully implemented, the Permittee will then be qualified to apply for a mixing zone. A time frame will be given to the Permittee to conduct such a study through a permit modification. During the interim period before the final effluent limit (water quality criterion for zinc) becomes effective, a performance-based limit is expected to be met prior to discharge to surface water. The Department proposes to clarify the last sentence in the second paragraph of the Mixing Zones section on page 12 of the permit, to read as follows: "There are no mixing zones granted to this facility in this permit at this time." This is a true statement.

2 This comment is the same as comment #1 on your June 24, 2003 letter. Please see the Department's response letter dated June 17, 2003. Your June 26, 2003

comment letter indicated the data reported on the DMRs for January through March 2002, were meant to be in the units of mg/L and not µg/L. Therefore, the performance-based effluent limit for zinc has been re-calculated to be 1138 µg/L, using a confidence level at the 99th percentile (see attached work sheet I). This number supercedes the number that was calculated previously in the Department's response letter dated June 27, 2003.

3, 4 These comments are the same as comments# 2, and 3 presented on your June 24, 2003 letter. Please see the Department's response letter dated June 27, 2003.

5 This comment is the same as the fourth comment made on the table "Additional Detailed Comments on the Draft Permit" of your June 24, 2003 letter. Please see the Department's response dated June 27, 2003.

6 Attached is the calculation sheet which shows the summary of the statistical analysis using submitted data between August 1997 and March 2003. By incorporating the three data points between January and March 2000 that were previously excluded in the calculation, in units of mg/L, the calculation shows a mean value of 159 µg/L with a standard deviation of 0.7857 using a lognormal distribution and the assumption that the nondetect values are equal to half of the detection limit. Therefore, the upper 95th percentile confidence level of the effluent samples value listed on the last paragraph of Attachment I, page 24 of the fact sheet, will be corrected to read 159 µg/L. Please note that a normal distribution method was applied to determine this number. The 1991 EPA-TSD document recommends that daily pollutant discharge concentrations are generally lognormally distributed.

Responses to Additional Detailed Comments on the Draft Permit:

Page	Response to Comment
4, 14, 15	These comments have been addressed in the response letter for comments received dated June 24, 2003.

Response to Additional Comments on the Fact Sheet:

Page	Response to Comment
4, 5, 7(2), 8, 9, 10	These comments have been addressed in the response letter for comments received dated June 24, 2003
11	The Department proposes to change that sentence to be consistent with WAC 173-201A-070(4) as follows: "when the natural conditions of a receiving water are of higher quality than that criteria assigned, the natural conditions shall be protected."
15	A correction will be made to the summary of bioassay results. The MSDp values listed on your attachment, and the MDSp values listed on the draft fact sheet are generally in agreement except for one. Our Toxicologist

	believes that one of the MDSp values on your list is impossible (the 0.11% for the 9/23/98 topsmelt biomass MSDp). Data entry errors can occur in WET.
24	The upper 95th percentile confidence level of the effluent samples value is 159 µg/L by including the three numbers that were previously considered to be anomalous. Please see the above discussion.

Please forward this response letter to Mr. Frank Takahashi, Shell Oil Products, as the Department does not have an address for Mr. Takahashi.

If you have additional questions, please contact me by e-mail at jtra461@ecy.wa.gov or by telephone at (425) 649-7078.

Sincerely,

Jeanne Tran, P.E.
Water Quality Program

Cc: Frank Takahashi, Shell Oil Products US